What is claimed is:

1. A voice recognition device for a car navigation system, comprising:

a sound analysis means for acoustically analyzing a user's vocal utterance inputted by a voice input means and for outputting a feature vector for the input sound;

an acoustic-model storage means for storing in advance respective acoustic models for predetermined sound units, either a syllable or a phoneme being deemed a sound unit;

a sound-unit recognition means for checking the input-sound feature vector against the acoustic models to output a correlated sound-unit recognition candidate string;

a word-and-position-information registration means for correlating and registering in a word-and-position-information correlation dictionary the sound-unit recognition candidate string and position information acquired from a main unit of the car navigation system; and

a position-information searching/outputting means for calculating acoustic likelihoods by collating the input-sound feature vector outputted by the sound analysis means, against sound feature vectors for the sound-unit recognition candidate strings in the word-and-position-information correlation dictionary, and outputting, to the car navigation main unit, position information associated with that sound-unit

recognition candidate string whose calculated acoustic likelihood is not less than a predetermined threshold.

2. A voice recognition registration device for a car navigation system according to claim 1, further comprising:

a confused-sound-unit matrix storing means for storing in advance respective probabilities that an actual sound unit uttered by a human being will be recognized as a different recognition result as a consequence of the recognition precision of the sound analysis means, for each of recognition-result sound units; and

a word developing means for outputting a candidate resembling the sound-unit recognition candidate string by replacing each sound unit in the sound-unit recognition candidate string outputted by the sound-unit recognition means, with a recognition-result sound unit in which the probability that the confused-sound-unit matrix storing means has stored for that sound unit is not less than a predetermined threshold;

wherein the word-and-position-information registration means correlates the resembling candidate to the position information acquired from the car navigation system main unit and registers this information in the word-and-position-information correlation dictionary.

3. A voice recognition index-searching device comprising:

a similar-word indexing means for storing relationships between a representative word, selected from each of word groups generated in advance by categorizing a plurality of words into groups in which words resemble in pronunciation, and its group; and

a means for searching for similar words within a group, said means collating a sound feature vector for the representative word for each group stored in the similar-word indexing means against a given sound feature vector to calculate respective acoustic likelihoods, and collating a sound feature vector for each word in that group whose representative word has an acoustic likelihood, among the calculated results, not less than a predetermined threshold, against the given sound feature vector to calculate respective acoustic likelihoods, and outputting the word having the greatest acoustic likelihood.

4. A voice recognition index generation means comprising:

a representative word selection means for selecting a single word as a representative word from an original set composed of a plurality of words;

an acoustically similar word grouping means for extracting from the original set a word in which the acoustic likelihood between a sound feature vector for the word and a sound feature vector for the representative word is not less than a predetermined threshold, and including the extracted

word in a same group as the representative word; and

an original-set replacing means for passing to the representative word selection means the word set left by removing from the original set the word affiliated by the group, as another original set to be processed by the representative word selection means.

5. A voice recognition device for a car navigation system according to claim 1, wherein the position-information searching/outputting means includes a voice recognition index-searching device according to claim 3 or claim 5, and uses the voice recognition index-searching device to search for and output words, their pronunciations, and position information stored in the word-and-position-information correlation dictionary or an external storage device.

6. A voice recognition device for a car navigation system according to claim 5,

wherein the word developing means extracts a probability stored in the confused-sound-unit matrix storing means for each sound unit of the resembling candidate, and outputs a probability list for the resembling candidate;

wherein the word-and-position-information registration means correlates and registers in the word-and-position-information correlation dictionary both the

probability list and the similar candidate with the position information; and

wherein the position-information searching/outputting means, after reading a resembling word candidate stored in the word-and-position-information correlation dictionary and the probability list for that resembling word, and if the probability in its probability list is not less than a predetermined threshold, calculates the acoustic likelihood by checking the input-sound feature vector against the sound feature vector outputted by the sound feature vector generation means and outputs the sound-unit recognition candidate string whose acoustic likelihood is not less than the predetermined threshold, and if the probability in the probability list is less than the predetermined threshold, the position-information searching/outputting means uses the voice recognition index-searching device according to claim 3 to search for words, their pronunciations, and position information stored in the external storage device.

7. A car navigation system comprising:

a current position detection means;

a map data storage means;

an image display means;

a graphical pointing means;

a destination input means; and

a voice recognition device according to any one of claims 1, 2, 5, or 6.